Claims

1. Treatment method of oncological and/or infectious and/or somatic diseases by acting on biological targets inside organisms, differs in that the biological target is extratcellular DNA including extracellular DNA circulating in blood plasma.

2. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1 differs in that the extratcellular DNA is inactivated by destruction, binding or modification.

3. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1and 2 , differs in that the extratcellular DNA is inactivated by destruction, binding or modification by injecting to patient of pharmaceutical agent which is capable to destroy, bind or modify free circulating DNA.

4. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1-3 , differs in that the extratcellular DNA is inactivated by destruction, binding or modification by pharmaceutical agent's injection in amount sufficient for destruction and in therapeutic regime providing destruction, binding or modification in sufficient for therapeutic effect achievement period of time.

5. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1-4 differs in that the genetically modified cells or genotherapeutic constructions are injected to patient when said remedies induce synthesis in host's organism of biopolymers, capable to inactivate free circulating blood plasma DNA by its binding, destruction or modification.

6. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1 or 2, differs in that the circulating extracellular DNA is inactivated by destruction, binding or modification using extracorporeal blood processing.

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7. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1,2 or 6, differs in that the extracorporal purification of patient's blood from free circulating DNA is achieved by immune or affine absorption.

8. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1,2 or 6, differs in that the extracorporal purification of patient's blood from free circulating DNA is achieved by methods of gravitational blood surgery.

9. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1,2 or 6, differs in that the extracorporal purification of patient's blood from free circulating DNA is achieved by biological, chemical or photochemical inactivation.

10. Treatment method of oncological and/or infectious and/or somatic diseases according claim 1 or 2, differs in that the patient is immunized by vaccine , which vaccine contain blood plasma circulating DNA (including said DNA with naturally complexed proteins) as the antigen..

11. Treatment method of oncological and/or infectious and/or somatic diseases according claims 1-10 , differs in that the treatment is combined with surgical, chemiotherapeutic, hormonal, radiation and immunotherapeutic methods.

12. Pharmaceutical agent for oncological and/or infectious and/or somatic disease treatment, representing compound possessing desoxyribonuclease activity and/or being able to inactivate extracellular DNA including DNA circulating in patients blood plasma.

13. Pharmaceutical agent according claim 12 differs in that compound possessing desoxyribonuclease activity is desoxyribonuclease enzyme.

14. Pharmaceutical agent according claim 13 differs in that desoxyribonuclease is modified for better pharmacodynamic and pharmacokinetic performance and comprises desoxyribonuclease analogue with increased activity, desoxyribonuclease analogue not sensitive to endogenous inhibitors of desoxyribonuclease, polysialated desoxyribonuclease, pegylated desoxyribonuclease, desoxyribonuclease that is bound or mixed with synthetic and natural microspheres, liposomes, dextran, and other corpuscular natural and synthetic polymer carriers.

15. Pharmaceutical agent according claims12-14 which additionally contains ribonuclease and/or lipase and/or proteinase.

16. Pharmaceutical agent according claim 12, differs in that the compound possessing desoxyribonuclease activity is antibody possessing nuclease activity, in particular polyclonal DNA- abzymes, monoclonal DNA-abzymes or their derivatives.

17. Pharmaceutical agent according claim 12, differs in that the compound able to bind DNA is antibody able to bind DNA and its complexes and derivatives of said antibody.

18. Pharmaceutical composition for oncological and infectious diseases treatment, containing pharmaceutical agent according claims

12-16 in therapeuticcaly effective amount and pharmaceutically acceptable carrier or excipient.

19. Method to increase the life time which is achieved by inactivation of extracellular DNA circulating in blood plasma by said DNA destruction, binding or modification according claims 2-17.

20. Method of prophylaxis of pathologies connected with appearance and development of somatic mosaicismby the way of destruction, binding or modification of DNA according to claims 2-17.

21. Method to control the treatment efficacy of oncological and/or infectious and somatic diseases , to estimate the infection development , to control the efficacy of treatment directed to prolongation of life time , by the way of measurement of patient biochemical factors, differs in that monitoring for control of such treatment sizes of molecules, fractions' correlation, bindings with proteins, lipids and sugars, nucleotide consequences of free circulating blood plasma DNA are used.

22. Usage of blood plasma DNA and extracellular microbial DNA for evaluation of DNA involved in process of diseases' appearance and development, which usage includes its cloning, sequencing, identification of genes, unique and repeated sequences with their future studying.

Claims

1. Treatment method of malignant tumors or infectious caused by bacteria, or diseases caused by fungi or protozoa, or atherosclerosis, or diabetes, or diseases caused by mutations in somatic cells' genes by acting on biological targets inside organism, differs in that the biological target is the extratcellular DNA circulating in blood plasma.

2. Treatment method according claim 1 differs in that the extratcellular DNA circulating in blood plasma is inactivated by destruction , binding or enzymatic modification of it`s structure.

3. Treatment method according claim 1 or 2 differs in that the extratcellular DNA circulating in blood plasma is inactivated by destruction , binding or enzymatic modification of it`s structure by injecting to patient of pharmaceutical agent, which agent capable to destruct, bind or enzymatically modify its structure.

4. Treatment method according claims 1-3 differs in that the extratcellular DNA is inactivated by destruction, binding or enzymatic modification by pharmaceutical agent's injection into patient in amount sufficient for destruction, binding or enzymatic modification and in therapeutic regime providing destruction, binding or enzymatic modification within period of time, sufficient for achievement of therapeutic effect.

5. Treatment method according claims 1-4 differs in that the genotherapeutic constructions are injected to patient when said constructions are capable to induce synthesis in host's organism of biopolymers which could inactivate the extracellular blood plasma DNA.

6. Treatment method according claim 1or 2 differs in that the circulating extracellular blood DNA is inactivated by destruction, binding or enzymatic modification during extracorporal blood processing

7. Treatment method according claim 1or 2 differs in that the patient is immunized by vaccine , which vaccine contain blood plasma circulating DNA (including the said DNA with naturally complexed proteins)as the antigen..

8. Pharmaceutical agent for treatment according claims 1-4 which comprises deoxyribonuclease enzyme covalently linked with polyethylenglycol or polysialic acid or another high molecular weight natural or synthetic polymer

9. Pharmaceutical agent for treatment according claims 1-4 which comprises antiDNA antibodies, including antiDNA antibodies possessing deoxyribonuclease activity.

10. Method to increase the life time due to delay of onset of age-related pathologies, differs in that the life time increase is achieved by inactivation or binding or enzymatic modification of extracellular blood plasma DNA according claims 4-9.

11. Method of prophylaxis of pathologies connected with appearance and development of somatic mosaicism by the way of destruction, binding or enzymatic modification of blood extracellular DNA according to claims 4-9.